UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,135	11/07/2001	Yeshik Shin	594728113US	3390

			EXAMINER
25096	7590	10/03/2005	NGUYEN, STEVEN H D

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ART UNIT	PAPER NUMBER
2665	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	10/036,135	SHIN ET AL.
Office Action Summary	Examiner	Art Unit	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 November 2001_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-39_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-39_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-8, 12, 14-23, 25-30, 32 and 34-39 are rejected under 35 U.S.C. 102(b) as being

anticipated by Burnett (USP 5703875).

Regarding claims 1 and 25, Burnett discloses method in a communications

device for transmitting packets (Fig 2) comprising receiving packets, each packet being a control

packet or a data packet (col. 2, lines 1-9); storing the received packets in memory of the

communications device (col. 2, lines 19-29); selecting the stored packets based on whether the

packets are control packets or data packets (col. 2, lines 30-39); retrieving the selected packets

from memory of the communications device and transmitting the retrieved packets in order of

their selection (col. 2, lines 40-44).

Regarding claims 2 and 26, Burnett discloses the memory of the communications device

includes a portion for storing data packets (Fig 2, ref 13) and separate portion for storing control

packets (Fig 2, ref 12).

Regarding claims 3 and 27, Burnett discloses each portion of the memory is a

FIFO buffer (Fig 2).

Regarding claims 4 and 28, Burnett discloses the communications device has multiple ports and the selecting of the stored packets is performed for packets to be transmitted via the same port (Col. 2, lines 19-38).

Regarding claim 5, Burnett discloses the packet s with a packet type of control include command packets (col. 1, lines 18-22).

Regarding claims 6, Burnett discloses the packets with a packet type of control include status packets (col. 1, lines 18-22).

Regarding claim 7, Burnett discloses the packets with a packet type of control include message packets (Fig 2, Ref 12, Col. 2, lines 55-60).

Regarding claims 8, 29 and 30, Burnett further discloses while transmitting a data packet, receiving a control packet; interrupting the transmission of the data packet; transmitting the control packet; and after the control packet is transmitted, continuing with the interrupted transmission of the data packet (col. 2, line 61 to col. 3, line 17).

Regarding claims 12 and 32, Burnett discloses the communications device is a switch that connects host devices to data store devices (fig. 1 and col. 1, line 66 - col. 2, line 9).

Regarding claims 14 and 34, Burnett discloses the selecting includes selecting control packets before selecting data packets (col. 1, lines 43-48).

Regarding claims 15 and 35, Burnett discloses the selecting includes applying a selection algorithm (priority-based selection) that gives preference to selecting control packets over data packets (col. 1, lines 36-51).

Regarding claims 16 and 36, Burnett discloses a method in a communications

device for transmitting packets, the method comprising receiving packets in an order, each

packet being a first packet type or a second packet type (col. 1, lines 36-42), transmitting the

received packets in an order in which whether the packets are a first packet type or a second

packet type (col. 1, lines 36-51 and col. 2, lines 19-45).

Regarding claims 17-18 and 37-38, Burnett discloses the first packet type is a

data packet and the second packet type is a control packet and control packets are

transmitted before data packets (col. 1, lines 36-51).

Regarding claim 19, Burnett discloses the selecting includes applying a selection

algorithm (priority-based selection) that gives preference to selecting control packets

over data packets (col. 1, lines 36-51).

Regarding claim 23, Burnett discloses the communications device is a switch that

connects host devices to data storage devices (Fig. 1 and col. 1, line 66 - col. 2, line 9).

Regarding claims 20, 21 and 39, Burnett discloses the communications device has

multiple ports (Fig 1), the packets are received via a single port (Fig 1, Ref 23); and the

selecting of the stored packets is performed for packets to be transmitted via the same

port (Fig 1, ref 23).

Regarding claim 22, Burnett discloses the packets are received via different ports

(Fig 1, ref 23).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burnett (USP 5703875) in view of Ellis (USP 5497371).

        Regarding claim 9, Burnett fails to disclose each packet has a header and the continuing includes transmitting a header corresponding to the interrupted portion of the data packet. in the same field of endeavor, Ellis discloses continuing includes transmitting a header corresponding to the interrupted portion of the data packet (col. 2, line 55-65).

        Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for attaching a header to the remaining part of the packet as disclosed by Ellis into the system and method of Burnett. The motivation would have been to protect the interrupted packet from

6.   Claims 13, 24 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burnett (USP 5703875) in view of Howe (USP 20030189922).

Regarding claim 13, 24 and 33, Burnett fails to disclose the communications device is

part of a storage area network. However, Howe teaches a communications device (Fig. 9, an

integrated layer one switch having similar functions as disclosed in claim 1) is part of a storage

area network (par. 0077). Therefore, as was taught by Howe, it would have been obvious to have

the communications device of Burnett configured as part of a storage area network in order

to provide a variety of applications for the packet-based communications network using

the method of packet ordering based on the packet type.

7.   Claims 10-11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Burnett (USP 5703875) in view of Cidon (USP 5343473).

Regarding claim 10, Burnet fails to disclose continuing transmitting includes transmitting

the remainder of the data packet without transmitting a new header. However, Cidon discloses

continuation of a data packet transmission after an interruption of a control packet can be done

by transmitting the remainder of the data packet without a new header (Fig 2, Ref 20h discloses

the remainder of packet is transmitting without header).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention was made to apply a step of continuing transmitting of the remainder of the data

packet without transmitting a new header as disclosed by Cidon into Burnet's method

since an advantage of doing so is to maintain the integrity of data packets before and

after the interruption made by the control packet.

Regarding claims 11 and 31, Burnett discloses the interrupting of the transmission

includes transmitting a control message to preempt any data message currently transmitted and

continuing the interrupted transmission by reverting the crossbar state to resume data message

(col. 3, lines 7-17). Burnett differs from the claimed invention in that he does not teach transmitting a preempt primitive and a continue primitive before and after the interruption, respectively. However, Cidon discloses a method and system for transmitting a preempt primitive and a continue primitive before and after the interruption, respectively (Fig 2, Ref 20C, preempt on and 20G is preempt off and the remainder of packet 20b will be transmitting, Col. 5, lines 56 to col. 6, lines 8).

Since, Burnett suggests the use of start and end of message and preemption indicator. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to apply a preempt primitive and a continue primitive before and after the interruption, respectively as disclosed by Cidon into the system and method of Burnett in order to inform the receiving side of the start and ending of the interruption prioritized by the control packet.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Honig (USP 6487171) discloses a switch for halting the transmitting packet and transmitting broadcast packet and resuming transmitting of the remainder of transmitting packet wherein each type of packet is stored in different portion of buffer.

Calvignac (USP 5557608) discloses a switch for halting the transmitting packet and transmitting broadcast packet and resuming transmitting of the remainder of transmitting packet wherein each type of packet is stored in different portion of buffer.

Aatresh (USP 6067301) discloses a switch for transmitting control packet before data

packet wherein each type of packet is stored in different portion of buffer.

Sourani (USP 6631132) discloses a system for the transmitting packet and transmitting

broadcast packet and resuming transmitting of the remainder of transmitting packet wherein each

type of packet is stored in different portion of buffer.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159.

The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D. Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
9/27/05